

**Before the  
FEDERAL COMMUNICATION COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Facilitating the Deployment of Text-to-911	)	PS Docket No. 11-153
and Other Next Generation 911 Applications	)	
	)	
Framework for Next Generation 911	)	PS Docket No. 10-255
Deployment	)	

**I. INTRODUCTION**

Sprint Nextel Corporation (“Sprint”) hereby submits these reply comments in response to comments filed in the above-referenced proceeding.<sup>1</sup> Sprint supports the Commission’s efforts to make an interim text-to-911 offering available to consumers in the near-term and has demonstrated its support for these efforts as a signatory to the voluntary commitment to provide text-to-911 service signed by the four largest wireless carriers.<sup>2</sup> As discussed in Sprint’s previous filings, however, the Commission should remain cognizant of the limitations of SMS technology and fully recognize that a text-to-911 service offering based on existing SMS technology will be limited to a best-efforts service.<sup>3</sup> The interim text-to-911 offering cannot be expected to deliver the same features and capabilities currently available for voice calls to 9-1-1.

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<sup>1</sup> *Facilitating the Deployment of Text-to-911 and other Next Generation 911 Applications*, PS Docket No. 11-153; *Framework for Next Generation 911 Deployment*, PS Docket No. 10-255, *Further Notice of Proposed Rulemaking* (Rel. December 13, 2012) (“FNPRM”).

<sup>2</sup> See Letter from Terry Hall, APCO International, Barbara Jaeger, NENA, Charles W. McKee, Sprint Nextel, Robert W. Quinn, Jr, AT&T, Kathleen O’Brien Ham, T-Mobile USA, and Kathleen Grillo, Verizon, to Julius Genachowski, Chairman, Federal Communications Commission, and Commissioners McDowell, Clyburn, Rosenworcel and Pai; PS Docket 11-153, PS Docket No. 10-255 (Dec. 6, 2012) (the “Voluntary Commitment”).

<sup>3</sup> See Sprint Comments filed Jan. 29, 2013 at 2, Sprint Comments filed March 11, 2013 at 7.

Sprint disagrees with those commenters that argue the Commission should impose additional obligations on CMRS carriers beyond what was contemplated in the Voluntary Commitment. In particular, Sprint opposes recommendations that the Commission require carriers to provide more detailed location information, similar to what is provided today for voice calls to 9-1-1. More detailed location information is not technically feasible as part of the current interim SMS-based text-to-911 offering and significant further development work, time, and expense would be necessary before such a capability could be deployed. This would undermine the goal of providing a near-term solution based on existing technology and would divert carrier resources away from focusing on Next Generation 9-1-1 (“NG911”) deployment. Sprint also disagrees with recommendations that the Commission adopt the NENA i3 standard as the sole standard for NG911 service provisioning.

## **II. DISCUSSION**

### **A. Routing and Location Accuracy**

In the FNPRM, the Commission proposes to require CMRS carriers to route 9-1-1 text messages automatically to the appropriate Public Safety Answering Point (“PSAP”) based on the cell sector to which the mobile device is connected, which is essentially equivalent to Phase I location information for voice E911 service.<sup>4</sup> Sprint supports the Commission’s proposal that carriers use cell sector information for routing purposes and believes the Commission has drawn the appropriate conclusion, based on the Commission’s review of the record and an examination of currently available technology.

The process most carriers will use for routing text messages is different than the process used for routing voice messages. For voice calls to 9-1-1, the wireless carrier itself routes the

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<sup>4</sup> FNPRM at par. 118.

call based upon the cell of origin, whereas for text messages, the carrier's Gateway Service Provider ("GSP") will utilize the centroid of the cell obtained from the carrier's network to independently route the text message to the PSAP that indicated to the GSP they would be responsible for that geographical area. When a text message arrives at a carrier's Short Message Service Center ("SMSC"), there is no origination information included with the message. For this reason, most carriers will need to utilize the services of a GSP to generate a query back into the carrier's Location Based Services server to extract cell sector location information. Once the GSP has this information, they can then use Geographic Information Systems ("GIS") shape files to determine the correct PSAP for routing purposes. Through this process, text messages can be routed to the appropriate PSAP using cell sector information.

A few commenters recommend that the Commission take action to require more detailed location information to be sent to the PSAP for interim SMS-based text-to-911 service. For example, the Boulder Regional Emergency Telephone Service Authority ("BRETSA") argues, "...the Commission should not simply adopt a deadline for CMRS providers to provide text-messaging to 9-1-1, but should also adopt additional deadlines for improvements in the resolution of location information used to route text messages to 9-1-1, and to be provided with such text messages."<sup>5</sup> Similarly, The Association of Public-Safety Communications Officials ("APCO") comments, "We also believe that accurate location information for each 9-1-1 text should be provided to the PSAP. Ideally, that location information should be at least as accurate as the Phase II requirements for wireless voice calls to 9-1-1. The Commission should continue to push the industry to meet that level of accuracy for text-to-9-1-1 within the earliest possible

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<sup>5</sup> Comments of BRETSA at 13.

timeframe.”<sup>6</sup> Sprint disagrees with these recommendations. Phase II equivalent location information will not be available as part of the location determination process most carriers will use, and it is not technically feasible for CMRS carriers to provide Phase II equivalent location information without significant development work and changes to existing systems.

In the FNPRM, the Commission stated, “We are therefore concerned that it could initially be overly burdensome to require CMRS providers to comply with the Commission’s Phase II E911 location accuracy rules when transmitting text messages to 911.”<sup>7</sup> The Commission’s concern that requiring Phase II location accuracy information could be overly burdensome to CMRS providers is well-founded. As explained above, using a GSP, carriers will be able to ensure that text messages are properly routed using cell sector information. More detailed location information beyond cell sector location is not included as part of this routing or location determination process. In order to obtain location information equivalent to Phase II information, carriers would need to develop or contract with a third-party vendor to develop an additional technical solution and modifications to handsets would also likely be needed since proposed solutions entail utilizing Global Positioning System (“GPS”) technology on handsets.

Notably, a subscriber wireless device does not enter “emergency mode” for texting the way it does with voice calls to 9-1-1, so assisted GPS data is not available. On an emergency voice call, the subscriber equipment triggers GPS positioning technology to activate when the emergency call is made. For a text message going to a PSAP, there is no equivalent trigger of location determination. Without changes to the handset and its associated signaling, cell sector information is the best information that can be provided. In addition, utilizing GPS technology

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<sup>6</sup> Comments of APCO at 4-5.

<sup>7</sup> FNPRM at par. 123.

would likely trigger consumer privacy concerns that would need to be addressed since the privacy setting on the subscriber's device will impact whether GPS can be utilized.

Finally, the Commission should recognize that adding technical requirements such as Phase II equivalent location information and roaming support, as proposed by several commenters, to the proposed interim text-to-911 offering would affect all SMS service and would have international implications. For example, enhanced location information and roaming support would require device and network changes worldwide since carriers use SMS standards defined for international use. Implementing the changes on an international basis would add an additional level of complexity not contemplated by the Voluntary Commitment.

Requiring carriers to invest time and resources on providing additional features and capabilities, such as more detailed location information, as part of an interim solution will divert resources away from deploying NG911 service. Ultimately, Phase II equivalent location information is expected to be included as part of a NG911 offering. Carriers should, therefore, continue to focus their efforts on NG911 deployment, and the Commission should refrain from taking action that would derail these efforts.

#### **B. PSAP Options for Receiving Text-to-9-1-1, Standards for NG911 Text Messaging**

Several commenters urge the Commission to make the National Emergency Number Association ("NENA") i3 standard the "presumptive single protocol" or "sole standard" for NG911 service provisioning.<sup>8</sup> In addition, the Texas 911 Entities proposed that, "... within a reasonable period of future NENA i3 releases, perhaps within 18 months, providers should be

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<sup>8</sup> Comments of NENA at 15, Comments of the Texas 9-1-1 Alliance, the Texas Commission on State Emergency Communications, and the Municipal Emergency Communication Districts Association (the "Texas 911 Entities") at 3.

required to demonstrate compliance with the future NENA i3 release.”<sup>9</sup> These approaches, however, would bypass alternatives that may prove more effective in the long run, including the use of the 3rd Generation Partnership Project IP-Multimedia Subsystem (“3GPP IMS”), which is an alternative that is currently being explored by the Alliance for Telecommunications Industry Solutions (“ATIS”). The Commission should leave the door open for future protocols, such as 3GPP IMS. Notably, if the Commission were to adopt the NENA i3 protocol as the presumptive single protocol, as the Texas 911 Entities propose, the Commission would have to mandate that all NG911-capable PSAPs upgrade to the new NENA i3 release at the same time. This would limit the PSAPs’ flexibility to deploy text-to-911 and NG911 based on individual needs.

### **III. CONCLUSION**

For the reasons set forth herein, the Commission should not take further action to require CMRS carriers to provide location information equivalent to Phase II E911 location information as part of the interim SMS-based text-to-911 solution outlined in the Commission’s FNPRM. In addition, the Commission should refrain from taking action to establish the NENA i3 protocol as the sole standard for NG911 service provision.

Respectfully Submitted,

SPRINT NEXTEL CORPORATION

/s/ Allison M. Jones

Ray M. Rothermel  
Allison M. Jones

900 7th Street, NW, Suite 700  
Washington, DC 20001  
703-433-4992

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<sup>9</sup> Comments of the Texas 911 Entities at 3.

Its Attorneys

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